



# International INNOVATION

Disseminating science, research and technology

ISSUE  
169

## INTO THE UNKNOWN

## AND BACK AGAIN

### EXCLUSIVES

- NASA's Ames Research Center
- American Meteorological Society
- Association of Environmental & Engineering Geologists

### RESEARCH SPOTLIGHT

- Universities Space Research Association
- International Association of GeoChemistry
- European Association of Agricultural Economists

### EVENT REVIEW

- 12th ReInventing Space Conference
- Communicate 2014





Regulars

- 4**  
In brief
- 46**  
Community
- 52**  
Research roundtable: Making it count
- 75**  
Register
- 108**  
The last word: Will disruptive propulsion rescue aviation?

Analysis

- 9**  
**Universities Space Research Association**
- 18**  
**12th ReInventing Space Conference**
- 47**  
**International Association of GeoChemistry**
- 50**  
**Rare earth elements: The facts**
- 63**  
**Communicate 2014**
- 69**  
**World Nature Organization**
- 82**  
**Genetic modification: The facts**
- 84**  
**European Association of Agricultural Economists**

Research highlights

- 6**  
**NASA's Ames Research Center**  
In an exclusive interview, Head of NASA's Ames Research Center **Dr Simon P Worden** discusses the Center's research, as far-reaching as other galaxies, and its aims to impact on life a little closer to home. Founded in 1939, Ames has taken part in groundbreaking work including the blunt body re-entry concept that revolutionised early space exploration in the 1950s and the recent Kepler mission
- 23**  
**American Meteorological Society**  
AMS was established in 1919 to provide a foundation for progress in meteorology and does so by offering the community conferences, journals, and education and policy activities. Here, **William Gail**, President, speaks about how the organisation is striving to have a bigger impact on society and facilitating increased collaboration between Earth system scientists
- 36**  
**Association of Environmental & Engineering Geologists**  
As AEG begins to gain greater prominence worldwide, newly elected President **Ken Ferguson** describes his enthusiasm for the role and the field of engineering geology. Applied geology, an understudied and underfunded research area, is critical for public safety and Ferguson highlights the need for international cooperation to ensure that knowledge and expertise are transferred within the research community to tackle the field's biggest challenges

“ The discovery of life outside our solar system – which will almost certainly happen in our lifetimes – has major implications ”

**15**  
**Dr Gerard van Belle**

# Projects

---

- 12**  
**Highly charged**  
NÖRTERSHÄUSER
- 15**  
**The curtain of night**  
VAN BELLE
- 20**  
**A matter of perception**  
SUPERCDMS
- 26**  
**Turbulent turbines**  
BASTIAANS
- 30**  
**Looking up**  
NOTO
- 33**  
**Leading the waterway**  
HOUSER
- 40**  
**An attractive education**  
MAGNET
- 43**  
**Earthly insights**  
PCIGR
- 56**  
**Making an impact**  
GRISCOM
- 59**  
**Greater knowledge,  
better climate**  
GREEN GREENLAND
- 72**  
**Eco-citizens of the  
Earth**  
BOUTET
- 76**  
**A culture of cultivation**  
RIVERA FERRÉ
- 78**  
**A transnational  
perspective**  
CORE ORGANIC
- 87**  
**The mysteries of  
marine evolution**  
MARTINDALE
- 90**  
**Fish in troubled  
waters**  
PEACOCK
- 93**  
**UV vision in fish**  
SIEBECK
- 96**  
**Precious resources**  
CRB-ANIM
- 99**  
**Understanding  
multivalent bonds**  
HAAG
- 102**  
**In the loop**  
VAN SINT ANNALAND
- 105**  
**Probing police  
systems**  
DENIS

Want more information?

---

To find out how you can feature in *International Innovation*, please contact Carlton Romaine: [cromaine@researchmedia.eu](mailto:cromaine@researchmedia.eu)

For more information about the contributors in this issue:

[www.nasa.gov/centers/ames/home](http://www.nasa.gov/centers/ames/home)

[www.ametsoc.org](http://www.ametsoc.org)

[www.aegweb.org](http://www.aegweb.org)

[www.usra.edu](http://www.usra.edu)

[www.iagc-society.org](http://www.iagc-society.org)

[www.eaae.org/eaee\\_site](http://www.eaae.org/eaee_site)

Register

---

Make sure you receive regular copies of *International Innovation* by completing and returning the enclosed registration form (page 75), or visit: [www.internationalinnovation.com/join-us/registration](http://www.internationalinnovation.com/join-us/registration)



# European Association of Agricultural Economists



EAAE is a network of economists and other professionals working on agro-food and environmental issues. Here, President of the Association **Giovanni Anania** speaks of the enduring need for sensible food and agricultural economic policies and outlines how the field needs to react to old and emerging global problems such as undernourishment, obesity and fairness along food chains

### Could you begin with a brief overview of the European Association of Agricultural Economists (EAAE) and describe its key present foci?

EAAE brings together economists and others interested in the problems facing agriculture, food and food industries, the environment and rural development in Europe. The two main objectives are to further knowledge and understanding in the area of agricultural, food, rural development and environmental economics, especially in the European context, and facilitate the exchange of experience, ideas and information between economists working on these issues.

The research of most of our members focuses on issues related, directly or indirectly, to basic rights in food production and consumption: everybody's right to food; the right for all people involved in food chains to receive fair remuneration for their contribution; and the right of future generations to receive natural resources from us which are not less, in quantity and quality, than those we received from previous generations.

### How has the organisation developed since its creation in 1975?

Since its inception, EAAE has been steadily growing in terms of membership, geographical representation, areas of interest and activities. EAAE has increased its membership over the years to more than 1,500 members today. Economists belonging to EAAE are from more than 70 countries extending over all continents.

Since 1975, the areas of interest of EAAE membership have evolved to respond quickly to changes in societal concerns. The research agenda has moved progressively away from being mostly farm management and national agricultural policy analysis orientated, to include issues related to rural development, the environmental impact of agricultural activities and policy interventions, the implications for food and food markets of the world becoming more and more globalised, and consumer issues, including the persistence of malnutrition and rapidly rising levels of obesity. The evolution of communication technologies has necessitated a continuous adaptation process to the new opportunities.

### What is your background and how did you come to occupy the role of President of EAAE?

I hold postgraduate degrees from the Universities of Naples (MS in Agricultural Economics), University of Essex (MA in Social Science Data Analysis) and University of California, Davis (PhD in Agricultural Economics). My main areas of interest are agricultural policy analysis, with an emphasis on the Common Agricultural Policy of the European Union, World Trade Organization negotiations and quantitative methods for trade policy analysis. I have been participating in EAAE activities (and benefiting from them!) since I was a graduate student. I was elected on the Board of the Association for a six-year term in 2002-08. Three years later, I was elected Vice President for 2011-14 and, finally, I was confirmed as President for the 2014-17 triennial period at the EAAE Congress in Ljubljana, Slovenia, last August.

### Which key goals do you plan to achieve during your term?

The current Board of the Association will pursue three main objectives for the 2014-17 term. Firstly, we want to make sure we continue to provide our membership and society at large with services of the same quality as in recent years. Secondly, we are looking to more effectively disseminate information on what we and our membership do (mainly by redesigning and re-engineering the EAAE website and better exploiting the potentialities of rapidly evolving social media). Finally, we hope to expand our activities that specifically seek to address the needs of members who are in the early stages of their careers.

### How can connections between agricultural economists across the globe be enhanced and what is the importance of this?

A strategy to reduce poverty and expand food production in a socially and environmentally sustainable way also involves adopting effective

policies (and avoiding those which would work against achieving these objectives). The role of economists whose research focuses on food markets and the implications of policy interventions for food production and rural development is important for the knowledge basis it can provide for decision making by both private and public relevant actors, as well as for the coordination needed to fight such global challenges at the international level.

In fact, in addition to promoting the dissemination of quality research in our highly ranked scientific journal, the *European Review of Agricultural Economics*, EAAE, in cooperation with the Agricultural Economics Society, has been publishing *EuroChoices* since 2001, a journal which is specifically devoted to the dissemination of research results with an evident, timely social relevance to a wide audience, extending well outside the boundaries of the academic world. EAAE also acts to facilitate global cooperation and interaction between agricultural economists by promoting events on highly relevant global issues jointly with other leading international scientific organisations, such as the American Agricultural and Applied Economics Association, Australian Agriculture and Resource Economics Society and International Association of Agricultural Economists.

### Can you give an insight into some of the events organised by the Association?

In addition to our triennial congresses, which usually involve 700-800 participants, EAAE promotes a few seminars every year. These are two- to three-day gatherings of a relatively small number of members (most often about 50) interested in exchanges and discussion of ongoing research on a specific topic. Seminars are meant to provide more possibilities than a large-scale congress for scientific exchanges and informal interaction with colleagues who are working in the same area. EAAE seminars have proven a successful format with more than 140 having been organised to date. In a few instances a seminar developed into what we call a forum, ie. a series of annual, or biannual, seminars focusing on different topics within the same research area.

## Past congresses

### EAAE organises a congress every three years on a theme of global relevance



Agri-Food and Rural Innovations for Healthier Societies – Ljubljana, 2014



Change and uncertainty – challenges for agriculture, food and natural resources – Zurich, 2011



People, Food and Environments: Global Trends and European Strategy – Ghent, 2008

### What would you define as the key problems facing the agricultural and food industries?

The main problem I see for the agro-food sector today is guaranteeing that every single person on the globe has access to enough food, in quantity and quality, to be able to live a healthy life. Still today, more than 800 million people – 11.3 per cent of world population – suffer from malnutrition. While the number of undernourished



The main problem I see for the agro-food sector today is guaranteeing that every single person on the globe has access to enough food, in quantity and quality, to be able to live a healthy life

people has been declining (in 1990-92 they were a little over 1 billion; 18.7 per cent of the population), the speed at which this figure has been declining is much slower than desirable and the decline unevenly distributed across regions. In sub-Saharan Africa, almost one-quarter of the population is malnourished and this number has increased between 1990 and today from 176 million (33.3 per cent of the population) to 214 million.

Today, malnutrition is not caused by an insufficient availability of food; in fact, enough food is available to adequately feed everybody, not only globally, but also at a regional level. Undernourishment is caused by the poverty in which a large share of the world population lives, which makes households unable to buy the food they need and which is available locally. Nevertheless, agriculture still plays an important role in reducing malnutrition: because of the importance of agricultural development in reducing poverty in rural areas, and due to the fact that the capacity of agriculture to keep expanding food production at a rate comparable to the, still extremely high, rate at which the population is expected to grow cannot be taken for granted. Moreover, reducing poverty and eradicating undernourishment needs to be pursued in an environmentally sustainable way. Simultaneously, an equitable distribution of the value generated in agro-food chains among all actors involved in each link, from input providers at one end, to farm workers, farmers, processors, traders and, at the opposite end, retailers is crucial.

#### How can these challenges be surmounted?

It is possible to overcome these issues by developing and adopting new, effective and socially and environmentally sustainable food production practices, and by promoting inclusive growth in developing countries, ie. growth which not only makes average per capita income increase, but, most importantly, reduces the number of people in poverty.



[www.eaae.org](http://www.eaae.org)

